

## CLAIMS

1. Cover (4) for sealing a container (1) comprising:
  - at least one bottom layer (3) and at least one top layer (2) arranged over said bottom layer (3);
- 5        - the bottom and second layer (2, 3) structured to form a recloseable aperture of the cover (4).
2. Cover of claim 1 or any one of the above claims, wherein at least one of the said bottom layer (3) and top layer (2) comprises a recloseable aperture (24, 34).
3. Cover of claim 1 or any one of the above claims, wherein at least one of the said bottom layer (3) and top layer (2) comprise a flap (24).
- 10        4. Cover of claim 1 or any one of the above claims, wherein at least one of the said bottom layer (3) and the top layer (2) comprise a butterfly valve (24).
5. Cover of claim 1 or any one of the above claims, wherein said flap or said butterfly valve is formed by a U-shaped cut (22, 31) in the layer (2, 3).
- 15        6. Cover of claim 5, wherein a bending fold axis (25) of said flap or butterfly valve of the at least one bottom layer (3) is not arranged over a bending fold axis (35) of said flap or butterfly valve of the at least one top layer (2).
7. Cover of claim 1 or any one of the above claims, wherein at least one of the at least one bottom and the at least one top layer (3, 2) comprises a cross-shaped cut thereby forming a butterfly valve.
- 20        8. Cover of claim 7, wherein the cross-shaped cut of the at least one top layer (2) is arranged with an offset of approximately 45° to the cross-shaped cut of the at least one bottom layer (3).
9. Cover of claim 1 or any one of the above claims, wherein at least the top layer (2) comprises a diaphragm-like recloseable aperture.
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10. Cover of claim 1 or any one of the above claims, wherein the bottom and top layer (3, 2) are glued together by polymerization.
11. Cover of claim 1 or any one of the above claims, wherein the bottom layer (3) is laminated at least partly onto the top layer (2).
- 5 12. Cover of claim 1 or any one of the above claims, further comprising a movable third layer (9) arranged between the at least one bottom layer (3) and the at least one top layer (2) for closing an aperture in the bottom and second layer (3, 2).
13. Cover of claim 12 or any one of the above claims, wherein said third layer (9) is structured to form a sliding valve.
- 10 14. Cover of claim 12 or any one of the above claims, wherein the third layer (9) comprises means (92) for moving the third layer (9) for closing the aperture of the cover (4).
- 15 15. Cover of claim 12 or any one of the above claims, wherein the cover (4) comprises a seal (7) arranged at least between the third movable layer (9) and the at least one bottom layer (3) in the area of the recloseable aperture.
16. Cover of claim 1 or any one of the above claims, wherein the seal (7) comprises at least one of the following materials: Teflon or one of its co-polymers, Silicone, PTFE.
17. Cover of claim 1 or any one of the above claims, wherein the recloseable aperture is ring-shaped, elliptical or approximately rectangular.
- 20 18. Cover of claim 1 or any one of the above claims, wherein at least one layer (2, 3, 9) comprises polyimide or polyimide or polyester or liquid crystal polymer.
19. Cover of claim 1 or any one of the above claims, wherein the top layer (2) comprises an electrically conductive coating layer (2A).
- 25 20. Cover of claim 1 or any one of the above claims, wherein the top layer (2) comprises a metal coating layer (2A).

21. Cover of claim 1 or any one of the above claims, wherein the cover (4) thickness is smaller than 400 µm.
22. Cover of claim 1 or any one of the above claims, wherein the recloseable aperture of the cover (4) comprises an area smaller than 60 mm<sup>2</sup>.
- 5    23. Cover of claim 1 or any one of the above claims, comprising a plurality of recloseable apertures for sealing a well plate (W), said well plate (W) comprising a plurality of containers (W1) for a liquid.
- 24 . Cover of claim 23 or any one of the above claims, wherein the cover is glued onto the well plate (W).
- 10    25 . Cover of claim 23 or any one of the above claims, wherein the cover is welded onto the well plate (W).
- 26 . Cover of claim 23 or any one of the above claims, wherein the bottom layer (3) of the cover is airtight connected to the well plate (W) material around a container (W1) of the well plate (W).
- 15    28. Method of retrieving or filling a liquid in a well plate having a plurality of containers for liquids, the method comprising the steps of:
  - providing the well plate with a cover arranged on top of the well plate, said cover comprising a plurality of recloseable apertures sealing the containers;
  - opening the recloseable aperture of at least one container of the well plate;
- 20    - retrieving or filling the liquid from the opened container or into the opened container;
- closing the opened aperture after retrieval or filling.